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(54) Title: PREPARATION OF MICROBIAL OIL CONTAINING POLYUNSATURATED FATTY ACIDS

(57) Abstract: The present invention provides a process for the production of a microbial oil comprising culturing a micro-organism in a two stage fermentation process where, in a last stage that precedes the end of fermentation, the carbon source is: consumed by the micro-organisms at a rate greater than it is added to the medium; added at a rate ≤ 0.30 M carbon/kg medium; or is rate limiting on the growth of the micro-organism. The micro-organisms thus have the carbon source restricted so that they preferentially metabolise fats or lipids other than arachidonic acid (ARA), so increasing the proportion of ARA in the cells. A microbial oil is then recovered from the micro-organism, using hexane as a solvent, that has at least 50% ARA and at least 90% triglycerides.

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A. CLASSIFICATION OF SUBJECT MATTER IPC 7 C12P7/64 C11C1/00 A23L1/30 A61K7/00 A61K7/48 A61K31/20 A61K31/232 //(C12P7/64, C12R1:645)		
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B. FIELDS SEARCHED Minimum documentation searched (classification system followed by classification symbols) IPC 7 C12P C11C A23L A61K		
Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched		
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C. DOCUMENTS CONSIDERED TO BE RELEVANT		
Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
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-/--		
<input checked="" type="checkbox"/> Further documents are listed in the continuation of box C. <input checked="" type="checkbox"/> Patent family members are listed in annex.		
* Special categories of cited documents : <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <p>*A* document defining the general state of the art which is not considered to be of particular relevance</p> <p>*E* earlier document but published on or after the international filing date</p> <p>*L* document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)</p> <p>*O* document referring to an oral disclosure, use, exhibition or other means</p> <p>*P* document published prior to the international filing date but later than the priority date claimed</p> </div> <div style="width: 45%;"> <p>*T* later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention</p> <p>*X* document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone</p> <p>*Y* document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.</p> <p>*G* document member of the same patent family</p> </div> </div>		
Date of the actual completion of the international search <div style="text-align: center; font-weight: bold;">18 February 2004</div>		Date of mailing of the international search report <div style="text-align: center; font-weight: bold;">09/03/2004</div>
Name and mailing address of the ISA European Patent Office, P.B. 5818 Patentlaan 2 NL - 2280 HV Rijswijk Tel. (+31-70) 340-2040, Tx. 31 651 epo nl, Fax (+31-70) 340-3016		Authorized officer <div style="text-align: center; font-weight: bold;">Döpfer, K-P</div>

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C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

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